

5 HIGH SPEED, AUTOMATED, CONTINUOUS FLOW, MULTI-DIMENSIONAL
 MOLECULAR SELECTION AND ANALYSIS

Abstract of the Disclosure

10 The invention provides novel methods for screening a sample to select a ligand
to a target of interest and for obtaining information about the ligand and its binding
characteristics. Specifically, the claimed multi-dimensional methods involve combining
a solution of heterogeneous ligands with the target of interest to screen the ligands on
the basis of one or more binding characteristics. Ligands having the first binding
characteristic bind to the target of interest thereby to form a target/ligand complex. The
15 complex then optionally is separated from the unbound components using any of a
variety of separation techniques, e.g., size exclusion. At least one of the complex or
unbound components then is introduced to a second "dimension". The second
dimension is capable of separating components based upon a second binding
characteristic. One then elutes the ligand having the desired binding characteristics.